

AMENDMENTS TO THE DRAWINGS

The attached 8 sheets of drawings include changes to Figures 3, 4, 5, 6, 8, 10a, 10b, 10c, 10d, and 11. These sheets, which include Figures 3, 4, 5, 6, 8, 10a, 10b, 10c, 10d, and 11 replace the original sheets including Figures 3, 4, 5, 6, 8, 10a, 10b, 10c, 10d, and 11. In Figures 3, 4, 5, 6, 8, 10a, 10b, 10c, 10d, and 11, the use of "um" where μm is called for has been corrected by replacing "um" with " μm ". No new matter is added.

REMARKS

Priority

The Office in paragraph 1 required Applicant to amend the first sentence of the specification following the title to include reference to the prior-filed application. Applicant thanks the Office for acknowledging claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c). Applicant has amended the first sentence(s) of the specification following the title in compliance with 37 CFR 1.78(a). Applicant had included reference to the prior-filed application in an application data sheet. No new matter is added.

Drawings

The Office in paragraph 2 objected to drawings because of the use of "um" where μm is called for. Corrected drawing sheets 3-5 and 7-11 for Figures 3, 4, 5, 6, 8, 10a, 10b, 10c, 10d, and 11 in compliance with 37 CFR 1.121 (d) are provided to overcome the objections. No new matter is added.

Specification

The Office in paragraph 3 objected to the disclosure because page 1 is obscured and in paragraph [0029], the combination of short wave and medium wave is repeated. The specification has been amended to overcome the objections. No new matter is added.

Claims Rejections - 35 USC §112 Second Paragraph

The Office in paragraph 6 rejected Claims 2 and 15 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. A §112 second paragraph rejection has two separate requirements, indefiniteness and failing to claim what applicant regards as the invention. With respect to indefiniteness, the "essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular disclosure, (2) the teachings of the prior art, and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made." (MPEP §2173.02).

Specifically, the Office explained "The fabrication of an array by "LWIR processing" is vague as there is no established definition of such processing and indefinite as a process limitation does not provide a distinction to a claim of the manufacture category." An example including the steps of long wave infrared (LWIR) processing is given, at least, in the flow chart of Applicant's Figure 9. Description is included in paragraphs 44, 73, and 77 of the present application.

For at least the reasons detailed herein, the indefiniteness rejection for claims 2 and 15 is traversed by the explanations provided herein. Review and allowance of the claims is requested.

Claims Rejections - 35 USC §102(b)

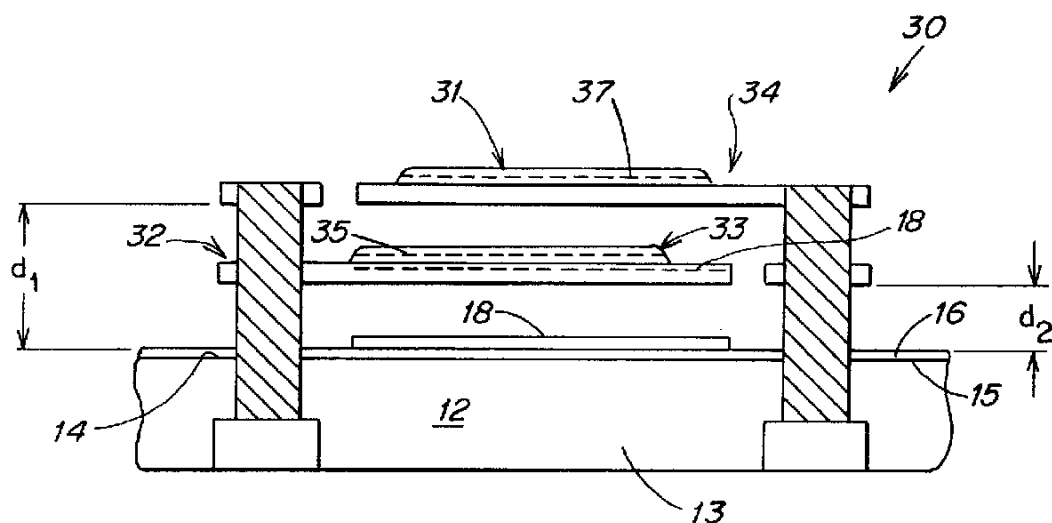
The Office in paragraph 8 rejected claims 1-8, 11, 13-15, 17, 19 and 20 under 35 U.S.C. 102(b) as being anticipated by Marshall et al. (US005811815A). A rejection based on anticipation requires that a single reference teach every element of the claim (MPEP § 2131). "The identical invention must be shown in as complete detail as is contained in the ... claim."

Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Or stated in another way, a "claim is anticipated only if each and every element as set forth in the claim is found, . . . described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicant has carefully considered the Office rejections and respectfully submits that the amended claims are distinguishable from the cited reference.

Independent claims 1, 6, and 13 have been amended to include "a single microbridge level" supported, at least, in Figures 2, 9, and 12 and paragraph 22 of the present application. Marshall et al use two independent microbridges to achieve dual band operation. The present application uses a single microbridge that is sensitive to dual bands. Sensing dual (or more) bands in a single microbridge is not the same as sensing dual bands in two independent microbridges. No new matter has been added.

Figure 2 of Marshall et al .and Applicant's Figure 2 are included below to illustrate this distinction.



Marshall et al FIG. 2 showing a first microbridge level 32 and a second microbridge level 34.

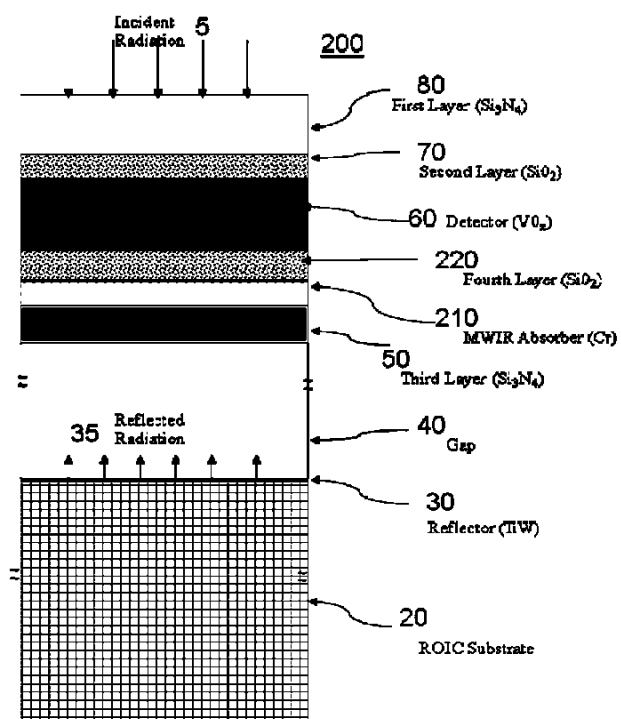


Figure 2

Applicant FIG. 2 showing a single microbridge level with a single gap 40.

Marshall et al in describing the embodiment of Figure 2 specifies in column 5, lines 52-55 and subsequently that feature **32** is a first microbridge level and feature **34** is a second microbridge level. Applicant's embodiment of Figure 2 depicts a single microbridge level with a single gap **40**.

Claims 2-5 depend from amended independent base claim 1, claims 7-8, and 11 depend from independent base claim 6, and claims 14, 15, 17, 19, and 20 depend from independent base claim 13. Applicant has amended the base claims to incorporate the subject matter features from the specification not found in the references, thereby curing the objections.

For at least the reasons detailed herein, the anticipation rejections for all the claims are cured by the amendments and explanations provided herein. Review and allowance of the independent claims and their respective dependants is requested.

Claim Rejections – 35 USC § 103

The Office has quoted the statute from 35 USC 103(a), which is referenced herein. The Office in paragraphs 10-13 has rejected claims 9, 10, 12, 16 and 18 as being unpatentable over Marshall et al. (US005811815A) in view of other references. Applicant has carefully considered the Office rejections and respectfully submits that the amended claims, as supported by the arguments herein, are distinguishable from the cited references.

According to the MPEP §2143.01, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art."

A useful presentation for the proper standard for determining obviousness under 35 USC §103(a) can be illustrated as follows:

1. Determining the scope and contents of the prior art;

2. Ascertaining the differences between the prior art and the claims at issue;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

The Office has rejected claims 9 and 12 as being unpatentable over Marshall et al. (US005811815A) in view of Oda (US006495829B1). The Office has rejected claim 10 under 35 U.S.C. 103(a) as being unpatentable over Marshall et al. (US005811815A) in view of Cole (US005286976A). The Office has rejected claims 16 and 18 under 35 U.S.C. 103(a) as being unpatentable over Marshall et al. (US005811815A) in view of Jack et al. (US005808350A). The Applicant has carefully reviewed the cited references and respectfully disagrees.

Obviousness cannot be established by combining prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. The mere fact that the prior art may be modified in the manner suggested by an examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.

The Board of Patent Appeals and Interferences (BPAI) continues to reverse Examiners that can not explain “why a person of ordinary skill in the art would have found it obvious” to combine the references in the manner proposed by the Examiner.” Further, “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *See Lee*, 277 F.3d at 1343-46; *Rouffett*, 149 F.3d at 1355-59.” *In re Kahn* (Fed. Cir. 2006, 04-1616).

Applicant has amended base claims to be allowable. All claims rejected as being unpatentable over Marshall et al. (US005811815A) in view of other references depend from these base claims.

For at least the reasons detailed herein, the obviousness rejections for all the claims are traversed by the explanations and amendments provided herein. Applicant reserves the rights to

make further arguments concerning other statements by the Office with respect to the cited references.

Applicant requests review and reconsideration of the presented claims. And, allowance of the independent claims and their corresponding dependant claims is respectfully requested.

Telephone Interview

Present Office policy places great emphasis on telephone interviews initiated by the examiner. For this reason, it is not necessary for an attorney to request a telephone interview. Examiners are not required to note or acknowledge requests for telephone calls or state reasons why such proposed telephone interviews would not be considered effective to advance prosecution. However, it is desirable for an attorney to call the examiner if the attorney feels the call will be beneficial to advance prosecution of the application. MPEP§408

Applicant believes the above amendments and remarks to be fully responsive to the Office Action, thereby placing this application in condition for allowance. No new matter is added. Applicant requests speedy reconsideration, and further requests that Examiner contact its attorney by telephone, facsimile, or email for quickest resolution, if there are any remaining issues.

Respectfully submitted,

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ANNOTATED SHEET SHOWING CHANGES MADE

3/13

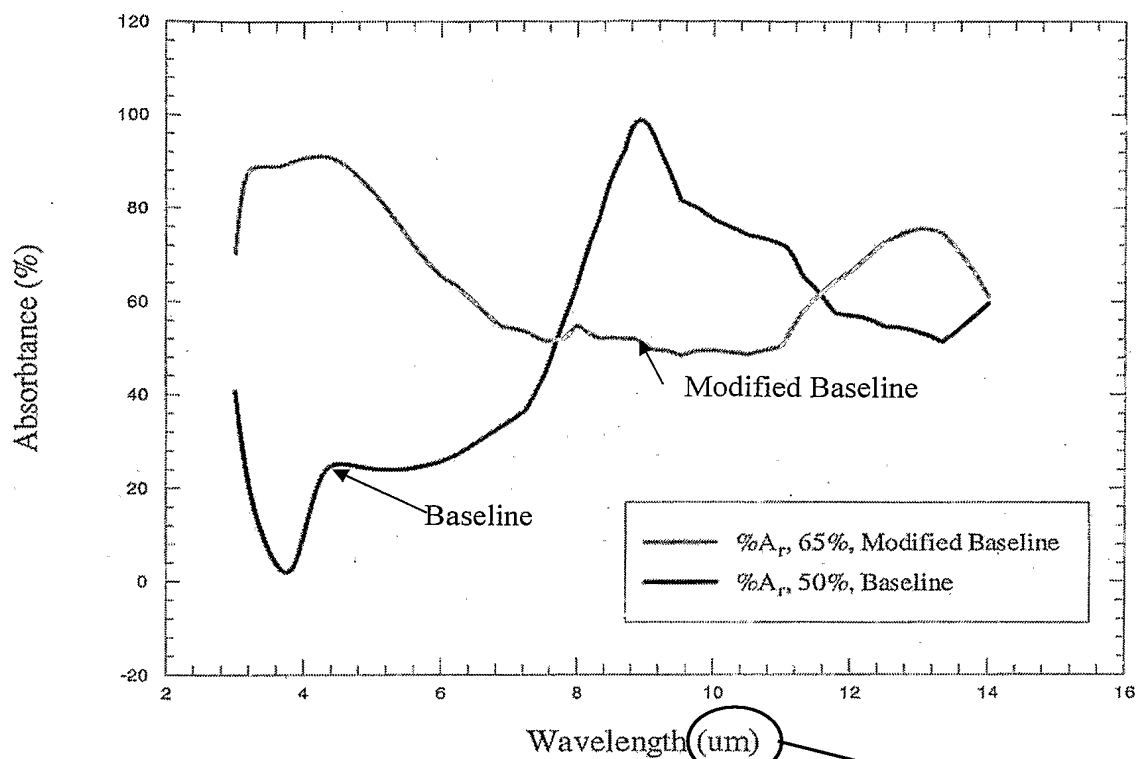


Figure 3

Changed to μm

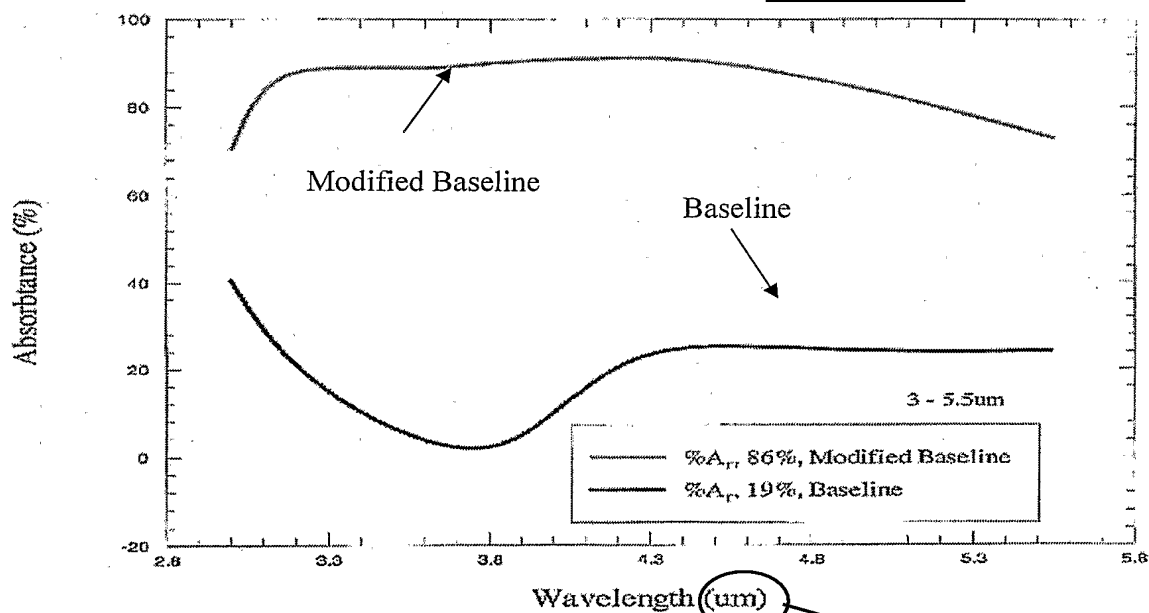


Figure 4

Changed to μm

ANNOTATED SHEET SHOWING CHANGES MADE

4/13

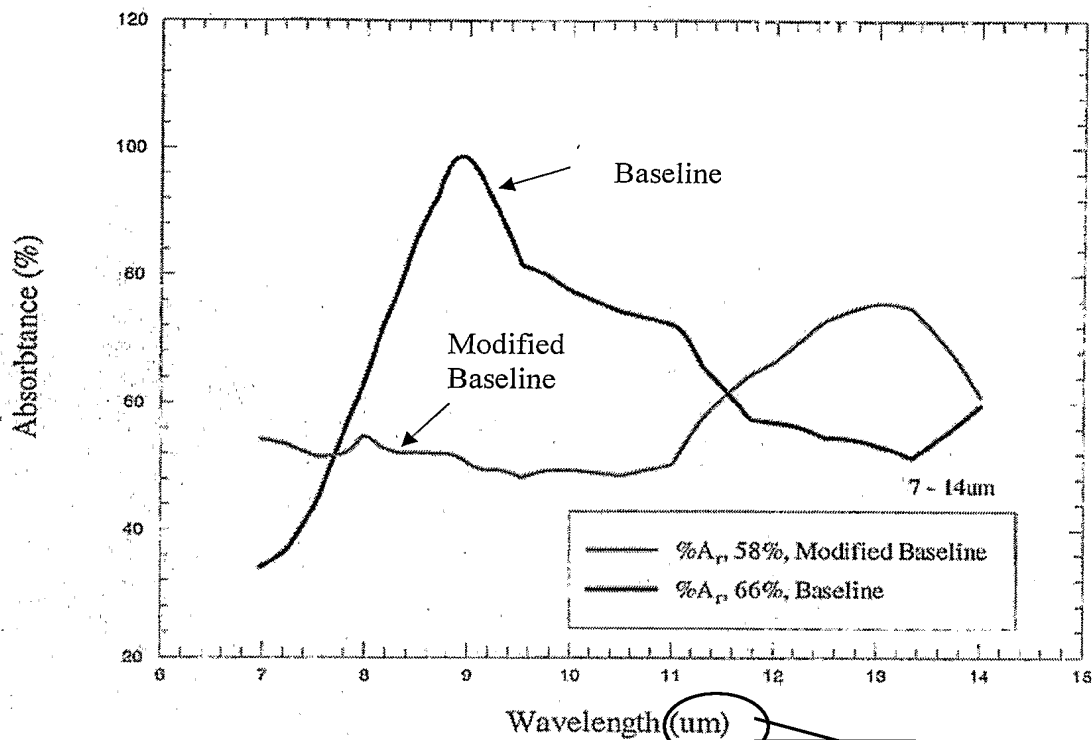


Figure 5

Changed to um

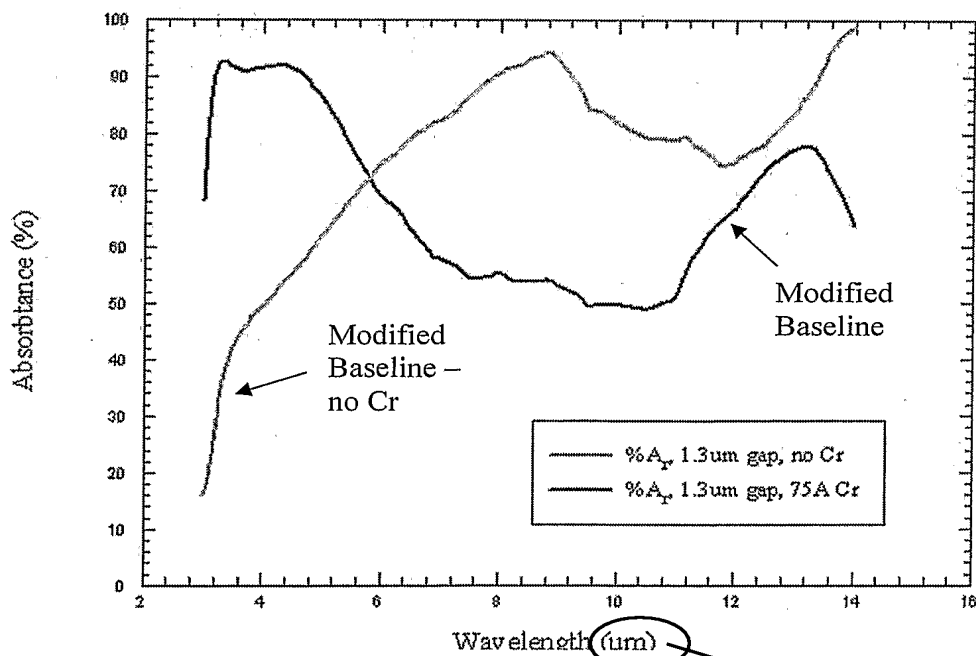


Figure 6

Changed to μm

ANNOTATED SHEET SHOWING CHANGES MADE

5/13

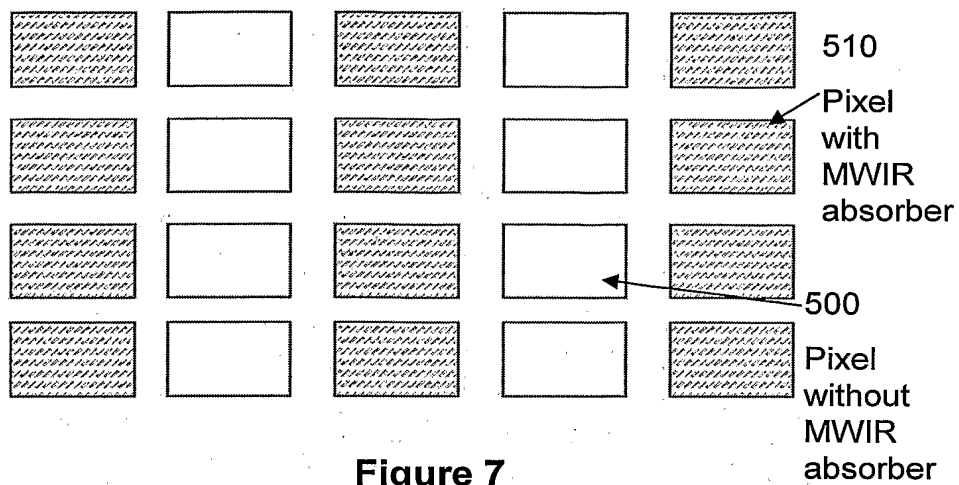


Figure 7

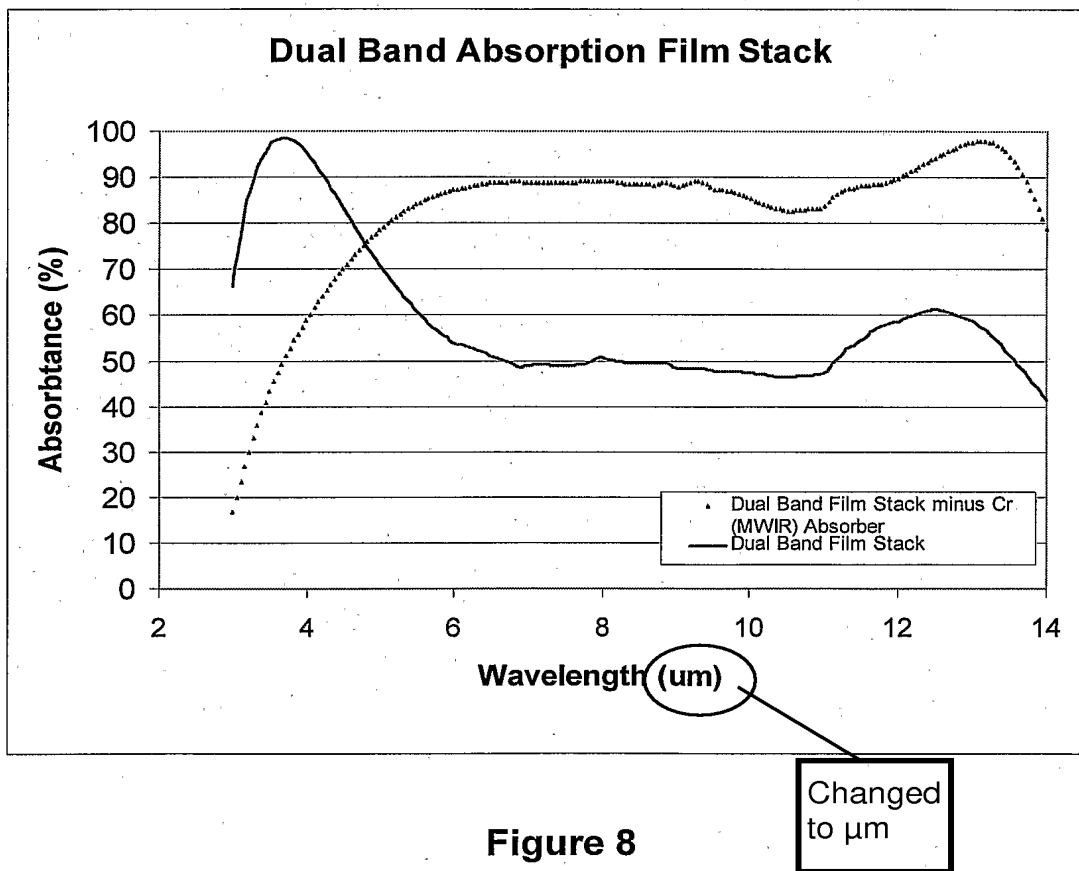
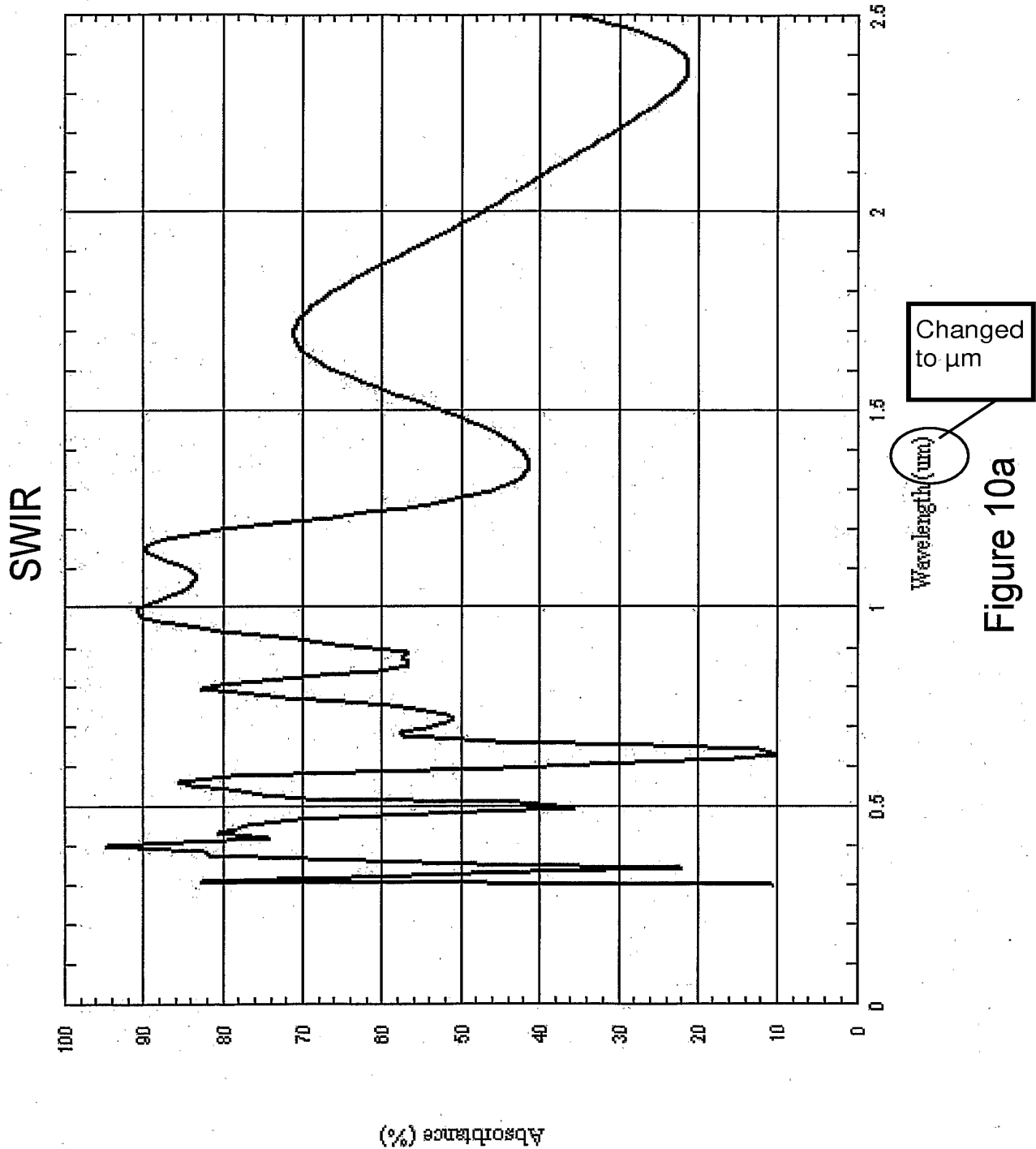
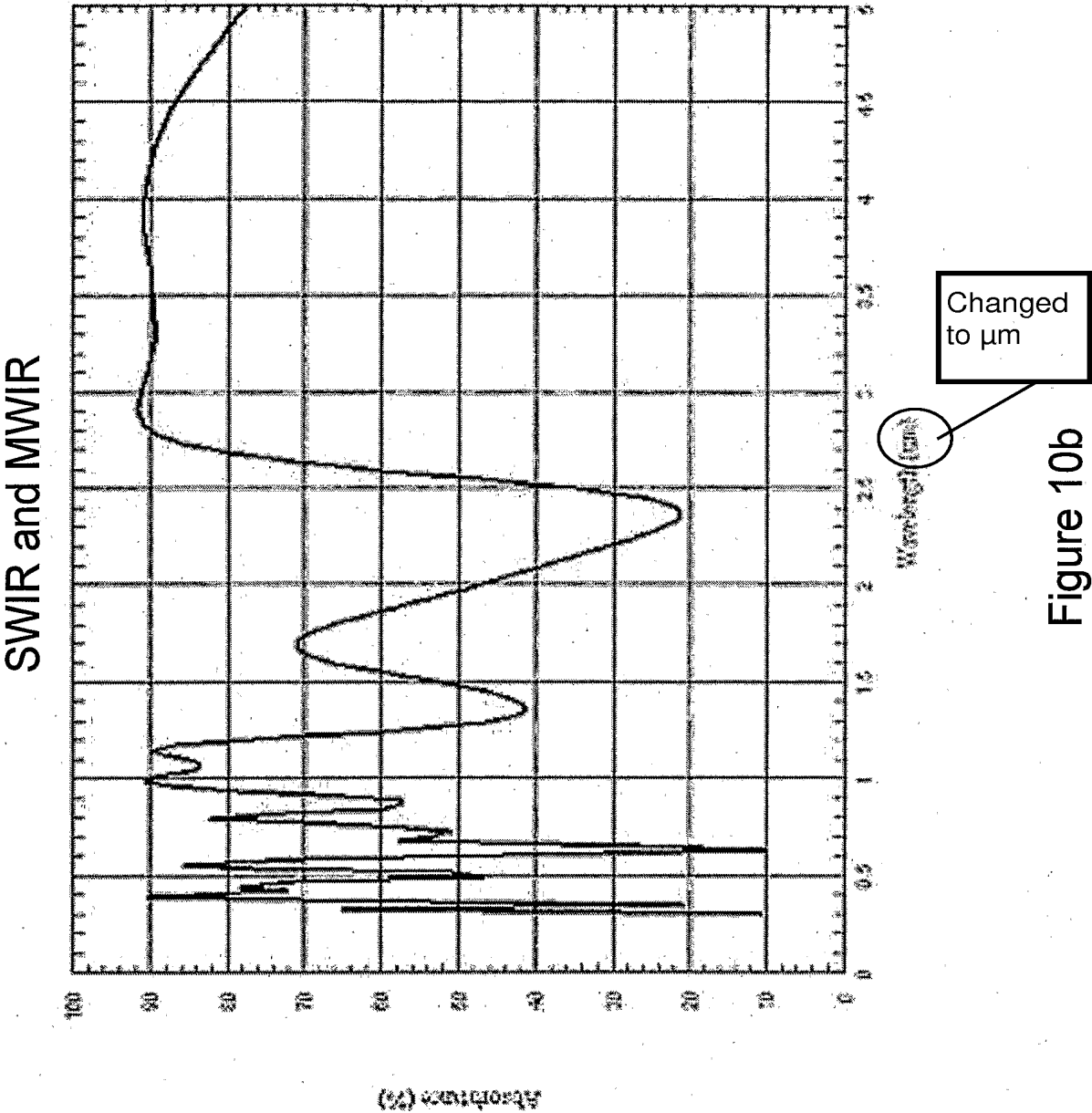


Figure 8





9/13

SWIR, MWIR, and LWIR

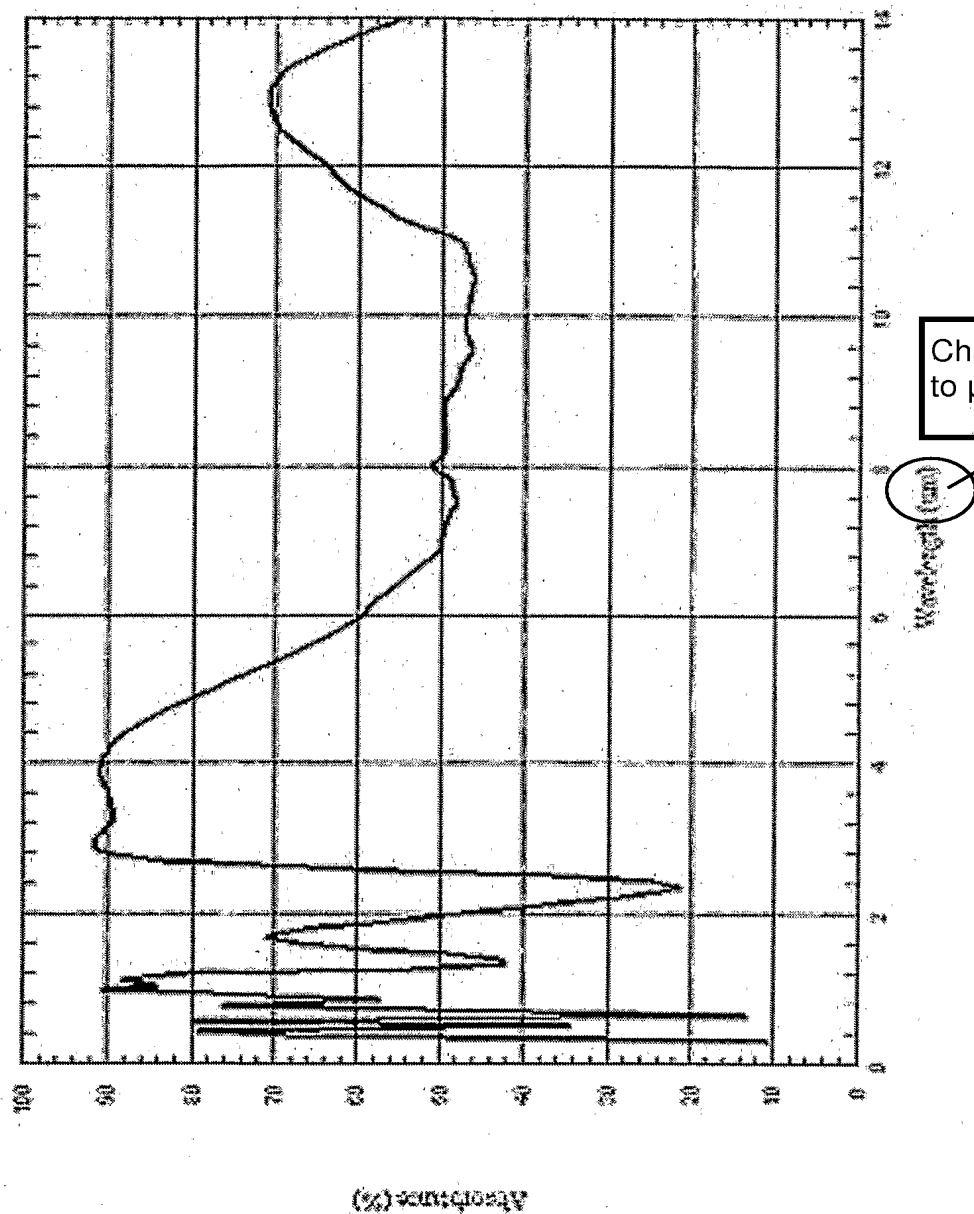


Figure 10c

10/13

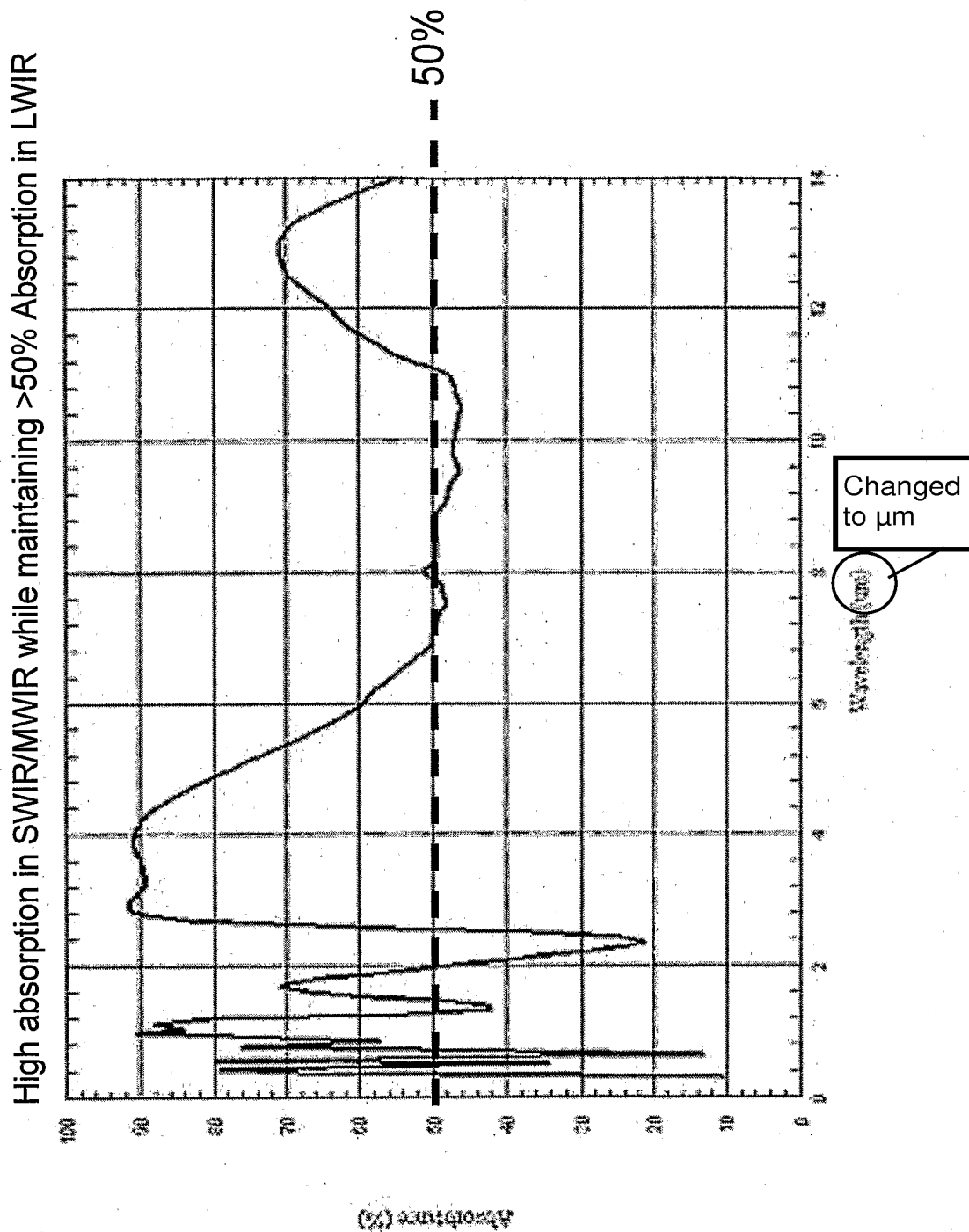


Figure 10d

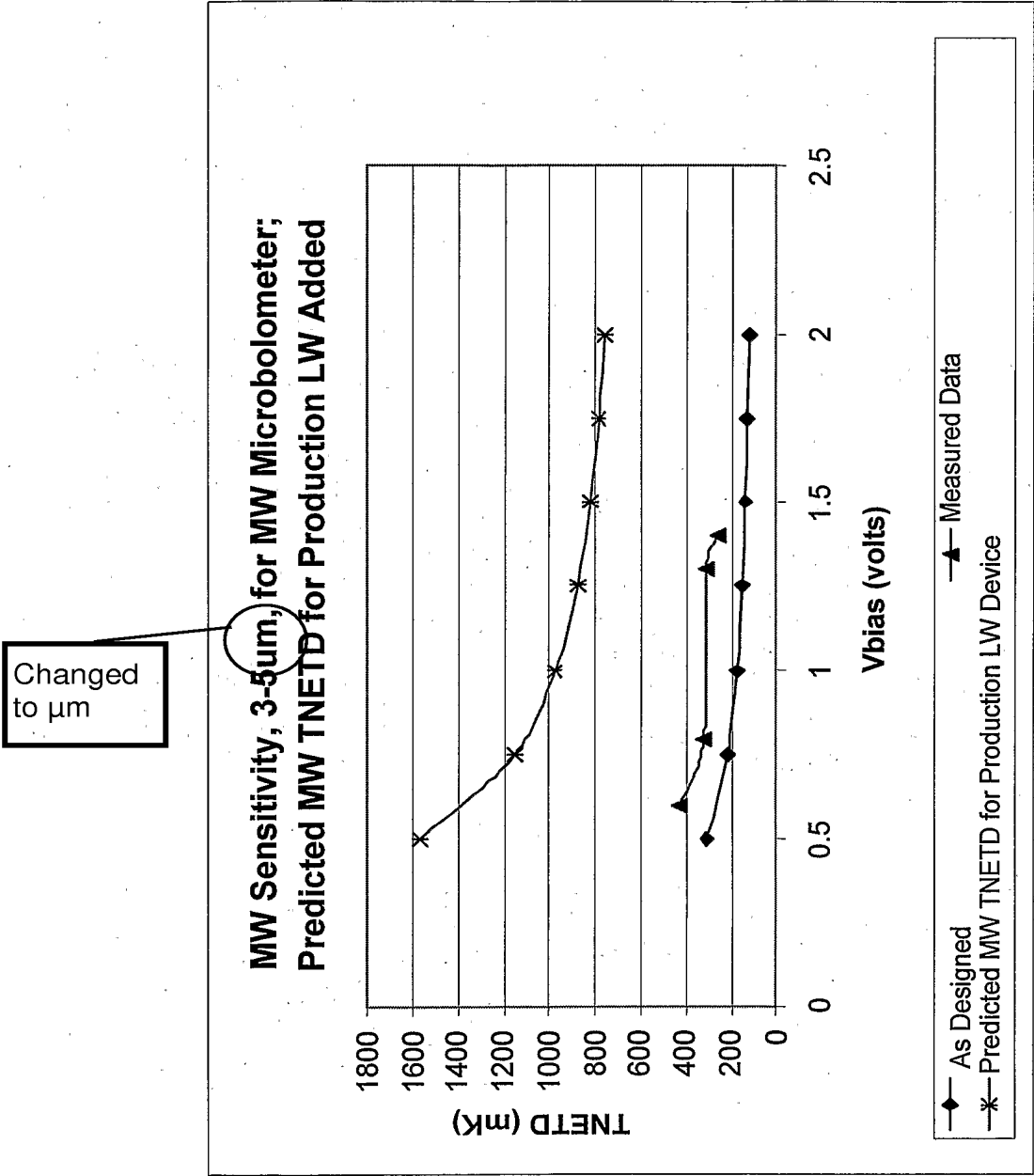


Figure 11